~ 1	RF Errors Corrected by the STIC stems Branch
Serval	Number: 09/751, 299 CRF Processing Fate: CRF Processing Fate: Edited by: Edited by: Verified by: State State CRF Processing Fate: State CRF Processing Fa
	Changed the margins in cases where the sequence text was "wrapped" down to the margins in cases where the sequence text was "wrapped" down to the margins in cases where the sequence text was "wrapped" down to the margins in cases where the sequence text was "wrapped" down to the margins in cases where the sequence text was "wrapped" down to the margins in cases where the sequence text was "wrapped" down to the margins in cases where the sequence text was "wrapped" down to the margins in cases where the sequence text was "wrapped" down to the margins in cases where the sequence text was "wrapped" down to the margins in cases where the sequence text was "wrapped" down to the margins in cases where the sequence text was "wrapped" down to the margins in cases where the sequence text was "wrapped" down to the margins in cases where the sequence text was "wrapped" down to the margins in cases where the sequence text was "wrapped" down to the margins in cases where the sequence text was "wrapped" down to the margins in cases where the sequence text was "wrapped" down to the margins in cases where the sequence text was "wrapped" down to the margins in cases where the margins is the sequence text was "wrapped" down to the margins in cases where the margins is the sequence text was "wrapped" down to the margins in cases where the margins is the margins in the margins is the margins is the margins is the margins is the margins in the margins is the
	Edited a format error in the Current Application Data section, specifically:
	Edited the Current Application Data section with the actual current number. The number inputted by the applicant was the prior application data; or other
	Added the mandatory heading and subheadings for "Current Application Data".
	Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
	Changed the spelling of a mandatory field (the headings or subheadings), specifically:
	Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were:
	Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited:
	Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
	Inserted colons after headings/subheadings. Headings edited included:
	Deleted extra, inválid, headings used by an applicant, specifically:
	Deleted: non-ASCII "garbage" at the beginning/end of files; secretary initials/filename at end of file; page numbers throughout text; other invalid text, such as
	Inserted mandatory headings, specifically: <220>, sequences # 2, 4
	Corrected an obvious error in the response, specifically:
	Edited identifiers where upper case is used but lower case is required, or vice versa.
	Corrected an error in the Number of Sequences field, specifically:
	A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
	Deleted ending stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a Patentin bug). Sequences corrected:
	Other:

*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form.

OIPE

RAW SEQUENCE LISTING DATE: 06/29/2001 PATENT APPLICATION: US/09/751,299A TIME: 14:23:08

Input Set : A:\DIVER1440-2final.txt

Output Set: N:\CRF3\06292001\I751299A.raw

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3 <110> APPLICANT: Madden, Mark
         Weiner, David P.
         Chaplin, Jennifer A.
 7 <120> TITLE OF INVENTION: METHODS FOR PRODUCING ENANTIOMERICALLY PURE
 8
         ALPHA-SUBSTITUTED CARBOXYLIC ACIDS
10 <130> FILE REFERENCE: DIVER1440-2
12 <140> CURRENT APPLICATION NUMBER: US 09/751,299A
13 <141> CURRENT FILING DATE: 2000-12-28
15 <150> PRIOR APPLICATION NUMBER: 60/254,414
16 <151> PRIOR FILING DATE: 2000-12-07
18 <150> PRIOR APPLICATION NUMBER: 60/173,609
19 <151> PRIOR FILING DATE: 1999-12-29
21 <160> NUMBER OF SEQ ID NOS: 4
23 <170> SOFTWARE: PatentIn Ver. 2.1
25 <210> SEQ ID NO: 1
26 <211> LENGTH: 1041
27 <212> TYPE: DNA
28 <213> ORGANISM: Unknown Organism
30 <220> FEATURE:
31 <223> OTHER INFORMATION: Description of Unknown Organism: Obtained from an
32
         environmental sample
34 <220> FEATURE:
35 <221> NAME/KEY: CDS
36 <222> LOCATION: (1)..(1041)
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                                         10
                                                             15
43 ccg gtg ttc ctc gat ctc gac cgc aca gtc gag aaa gcg atc ggc ctg
44 Pro Val Phe Leu Asp Leu Asp Arg Thr Val Glu Lys Ala Ile Gly Leu
45
                20
                                     25
47 atc gag cag gcg acc aag cag gac gtg cgc ctg atc gca ttc cca gag
                                                                      144
48 Ile Glu Gln Ala Ala Lys Gln Asp Val Arg Leu Ile Ala Phe Pro Glu
49
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                                                     45
51 act tgg att ccc ggc tat ccc ttt tgg ata tgg ctg ggc gcg ccg gct
                                                                      192
52 Thr Trp Ile Pro Gly Tyr Pro Phe Trp Ile Trp Leu Gly Ala Pro Ala
53
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                                                 60
55 tgg ggc atg cgc ttc gtc cag cgc tat ttc gag aat tcg ctc gtg cgc
                                                                      240
56 Trp Gly Met Arg Phe Val Gln Arg Tyr Phe Glu Asn Ser Leu Val Arg
57 65
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                                             75
                                                                 80
59 ggc agc aag cag tgg cag gcc ctg gcg gat gcg gcc cgc cgc cac ggc
                                                                      288
60 Gly Ser Lys Gln Trp Gln Ala Leu Ala Asp Ala Ala Arg Arg His Gly
61
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                                                             95
63 atg cat gtc gtg gcc ggc tat agc gag cgc gcg ggc ggc agc ctc tat
                                                                      336
64 Met His Val Val Ala Gly Tyr Ser Glu Arg Ala Gly Gly Ser Leu Tyr
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67 atg ggc cag gcg atc ttc ggc ccc gat ggc gat ctg atc gcc gcg cgc
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RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/751,299A
DATE: 06/29/2001
TIME: 14:23:08

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Output Set: N:\CRF3\06292001\I751299A.raw

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71	cqc	aaq	ctc	aaq	cct	acc	cat	aca	gag	cac	acc	ata	ttc	aac	gag	gga	432
	_	_		_	Pro					-							
73	,	130		4			135			,		140				2	
75	qac	aac	agc	cat	ctc	aca	ata	cac	gat	acċ	acc	atc	aaa	cac	ctc	aac	480
	_		_		Leu				-		-			_			
	145	4				150			_		155		_	,		160	
79	aca	ctc	tat	tac	tgg	gag	cac	atc	caq	cca	tta	tca	aaa	tac	acc	atq	528
			-	_	Trp				_		_	_			_	_	
81			-4	•	165					170				-	175		
83	tac	qcc	qcc	gac	gaa	caq	atc	cac	qtc	aca	tcq	taa	ccq	aqc	ttc	agc	576
		_	_	_	Ğlu	_	_		-	-	_		_	_		_	
85	-			180					185			-		190			
87	ctc	tat	cqc	ggc	atg	qcc	tat	qcq	ctc	qqa	ccq	gag	gtc	aat	acc	qcc	624
			_		Met	-					_		-			-	
89		-	195	-			-	200		-			205				
91	gca	agċ	caq	atc	tac	qcq	gtc	gag	ggc	ggc	tqc	tac	gtg	ctq	gcg	tcg.	672
	_	_	_		Tyr	-	_				-			_	_	_	
93		210			-		215		-	_	-	220					
95	tgc	gcg	acc	gtt	tcg	ccg	gag	atg	atc	aag	gta	ttg	gtg	gat	acg	ccc	720
96	Cys	Ala	Thr	Val	Ser	Pro	Glu	Met	Ile	Lys	Val	Leu	Val	Āsp	Thr	Pro	
97	225					230				-	235			_		240	
99	gac	aag	gag	atg	ttc	ctc	aag	gcc	ggc	ggc	ggt	ttt	gcc	atg	att	ttc	768
100	Asp	Lys	s Glu	ı Met	Phe	Leu	ı Lys	: Ala	a Gly	/ Gly	, Gly	y Phe	e Ala	a Met	: Ile	e Phe	
101					245					250)				255	5	
103	ggg	CCC	gad	ggc	cgc	gco	cto	gco	gag	g ccg	, ctc	ccg	gag	g acc	gaa	a gag	816
104	Gly	Pro	Asp	Gly	/ Arg	Ala	a Let	ı Ala	a Glu	ı Pro	Let	ı Pro	Glu	ı Thr	Glu	ı Glu	
105	•			260)				265	;)				270)		
107	gga	cto	g cto	ggto	gcc	gat	ato	gad	cto	ggc	ato	g ato	gcg	, ttc	g gcd	c aag	864
108	Gly	Leu	ı Let	ı Val	. Ala	Asp) Ile	e Asp) Lev	ı Gly	/ Met	: Ile	Ala	Let	ı Ala	a Lys	
109)		275	5				280)				285)			
111	. gcg	gcg	g gcc	gat	ccg	gco	g ggc	cac	c tat	: tca	cgg	g ccc	gad	gta	acq	g cgg	912
112	: Ala	Ala	a Ala	a Asp	Pro	Ala	a Gly	/ His	s Tyr	Ser	Arc	g Pro) Asp	Val	. Thi	: Arg	
113	}	290)				295)				300)				
115	ctg	ctg	j cto	g gat	: cga	cgt	ccc	g gcc	c caa	cgc	gto	gto	acq	, ctt	: gat	gcc	960
			ı Let	ı Asp	Arg	Arg	g Pro) Ala	a Glr	n Arg			. Thr	Leu	ı Asp	Ala	
117	305	•				310)				315	5				320	
	_		-					_	_		_				_	g cgc	1008
		Phe	e Glu	ı Pro			ı Glü	ı Asp) Lys	_	_	o Ala	Pro) Ala		ı Arg	
121					325					330					335	5	
			-	_	agc	_	-	_		_		3					1041
		Val	. Ala		ı Ser	Ala	a Ala	ı Ala			1						
125				340					345)							
				ID NO									•				
				'H: 3							•						
				PRI			. ^	•									
	. <21 . <22				Unk	nowr	ı Orç	janıs	SM								
エスン	くしょ	(U) > F	г р, Д ПГ	JKE:													

W--> 132 <220> FEATURE:

RAW SEQUENCE LISTING DATE: 06/29/2001 PATENT APPLICATION: US/09/751,299A TIME: 14:23:08

Input Set : A:\DIVER1440-2final.txt
Output Set: N:\CRF3\06292001\I751299A.raw

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140 Ile Glu Gln Ala Ala Lys Gln Asp Val Arg Leu Ile Ala Phe Pro Glu
141
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                                  40
                                                      45
142 Thr Trp Ile Pro Gly Tyr Pro Phe Trp Ile Trp Leu Gly Ala Pro Ala
144 Trp Gly Met Arg Phe Val Gln Arg Tyr Phe Glu Asn Ser Leu Val Arg
145 65
                         70
146 Gly Ser Lys Gln Trp Gln Ala Leu Ala Asp Ala Ala Arg Arg His Gly
147
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                                                              95
148 Met His Val Val Ala Gly Tyr Ser Glu Arg Ala Gly Gly Ser Leu Tyr
149
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                                     105
150 Met Gly Gln Ala Ile Phe Gly Pro Asp Gly Asp Leu Ile Ala Ala Arg
151
            115
                                 120
                                                     125
152 Arg Lys Leu Lys Pro Thr His Ala Glu Arg Thr Val Phe Gly Glu Gly
153
        130
                            135
                                                 140
154 Asp Gly Ser His Leu Ala Val His Asp Thr Ala Ile Gly Arg Leu Gly
155 145
                        150
                                             155
                                                                 160
156 Ala Leu Cys Cys Trp Glu His Ile Gln Pro Leu Ser Lys Tyr Ala Met
                    165
157
                                         170
158 Tyr Ala Ala Asp Glu Gln Val His Val Ala Ser Trp Pro Ser Phe Ser
159
                180
                                     185
                                                         190
160 Leu Tyr Arg Gly Met Ala Tyr Ala Leu Gly Pro Glu Val Asn Thr Ala
161
            195
                                 200
                                                     205
162 Ala Ser Gln Ile Tyr Ala Val Glu Gly Gly Cys Tyr Val Leu Ala Ser
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        210
                                                 220
164 Cys Ala Thr Val Ser Pro Glu Met Ile Lys Val Leu Val Asp Thr Pro
                                                                 240
165 225
                        230
                                             235
166 Asp Lys Glu Met Phe Leu Lys Ala Gly Gly Phe Ala Met Ile Phe
167
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                    245
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168 Gly Pro Asp Gly Arg Ala Leu Ala Glu Pro Leu Pro Glu Thr Glu Glu
169
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                260
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170 Gly Leu Leu Val Ala Asp Ile Asp Leu Gly Met Ile Ala Leu Ala Lys
            275
                                 280
                                                     285
172 Ala Ala Asp Pro Ala Gly His Tyr Ser Arg Pro Asp Val Thr Arg
173
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174 Leu Leu Leu Asp Arg Arg Pro Ala Gln Arg Val Val Thr Leu Asp Ala
175 305
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                                             315
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184 <211> LENGTH: 1014
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185 <212> TYPE: DNA

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/751,299A
DATE: 06/29/2001
TIME: 14:23:08

Input Set : A:\DIVER1440-2final.txt
Output Set: N:\CRF3\06292001\I751299A.raw

188	<213 <220 <223)> FI	EATUI	RE:			J			n of	Unkı	nown	Orga	anisr	n: Oł	otaine	d from an
190		eı	nvir	onmei	ntal	samp	ole										
	<220																
	<223		·														
	<222					(10	014)										
	< 40(_														
	atg			•		_	_	_	_			_	_	_			48
	Met	гÀг	Glu	Ата		ьуs	vaı	Ala	Cys		GIn	Ala	Ala	Pro		Tyr	
199		ant.	++~	~~~	5	200	~+ ~	a > a		10	a++	~~~	++~	2 t ~	15	~~~	0.6
	atg	_	_	-		_		_					_	-	_	gaa Glu	96
202	Mec	MSP	ьeu	20	ALG	1111	vaı	Ash	дуs 25	1111	TTE	Giu	шец	30	GIU	Giu	
	gca	aca	cat		aat	act	ċαt	cta		acc	+++	cca	паа		taa	att	144
	Ala	_	_			_	_	_		_		-	-				1 1 1
207			35	11011	11011		9	40		1114	2110	220	45	+ • • •		110	
	cca	aac		сса	taa	ttt	ctt		ctt	gac	tca	сса		taa	qca	atq	192
	Pro									_			_		-	_	
211		50	-		•		55	-		-		60		-			
213	caa	ttt	gta	cgc	caa	tac	cat	gag	aac	tca	ttg	gag	ttg	gat	ggc	cct	240
214	Gln	Phe	Val	Arg	Gln	Tyr	His	Glu	Asn	Ser	Leu	Glu	Leu	Asp	Gly	Pro	
215	65					70					75					80	
217	caa	gct	aag	cgc	att	tca	gat	gca	gcc	aag	cgg	ttg	gga	atc	atg	gtc	288
	Gln	Ala	Lys	Arg		Ser	Asp	Ala	Ala	_	Arg	Leu	Gly	Ile		Val	
219					85					90					95		
	acc	_		_	_	_		_							_	•	336
	Thr	Leu	Gly		Ser	Glu	Arg	Val	-	Gly	Thr	Leu	Tyr		Ser	Gln	
223	L		_ 4	100					105	- 4- 4-				110		4-4	204
	tgg				_			_				_		_	_	_	384
227	Trp	Pne	115	ату	Asp	ASII	сту	120	IIIL	тте	СТУ	Ald	125	Arg	гуз	ьeu	
	aaa	cct		+++	att	gaa	cat		tta	t t c	aac	aaa		aat	aat	tca	432
	Lys				_	_	-		_			_		_			132
231	-,-	130					135			20		140	3 1	1100	· ·	332	
	tcg		qcq	gtt	ttc	gag	acq	tct	gtt	gga	aqq		qqt	qqc	tta	tgc	480
	Ser			_			_		_			_				_	
235	145					150				_	155		_	_		160	
237	tgt	tgg	gag	cac	ctt	caa	ccg	cta	aca	aaa	tac	gct	ttg	tat	gca	caa	528
238	Cys	Trp	Glu	His	Leu	Gln	Pro	Leu	Thr	Lys	Tyr	Ala	Leu	Tyr	Ala	Gln	
239					165					170					175		
241	aat	gaa	gag	att	cat	tgt	gcg	gct	tgg	ccg	agc	ttt	agc	ctt	tat	cct	576
	Asn	Glu	Glu		His	Cys	Ala	Ala	-	Pro	Ser	Phe	Ser		Tyr	Pro	
243				180					185					190			
	aat				_	_			_	_		_		-		-	624
	Asn	Ala		ьуs	Ala	Leu	GTA		Asp	Val	Asn	Val		Ala	Ser	Arg	
247		4 - 1	195	سلسليم	~		~	200		- سلامہ	- ـــ		205	<u>.</u>	سد مم	a+ -	672
	atc		_	_	_			_		_			_	_			672
230	Ile	тÀц	WIG	val	GTU	дтλ	GTU	Суѕ	rue	val	ьeu	ита	ser	cys	HTG	ьeu	

RAW SEQUENCE LISTING DATE: 06/29/2001 PATENT APPLICATION: US/09/751,299A TIME: 14:23:08

Input Set: A:\DIVER1440-2final.txt
Output Set: N:\CRF3\06292001\I751299A.raw

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                                                      220
     253 gtt tca caa tcc atg atc gat atg ctt tgt aca gat gac gaa aag cat
                                                                             720
     254 Val Ser Gln Ser Met Ile Asp Met Leu Cys Thr Asp Asp Glu Lys His
     255 225
                              230
                                                  235
                                                                       240
     257 gcg ttg ctt ctg gct ggt gga cac tca cgt atc ata ggg cct gat
                                                                             768
     258 Ala Leu Leu Ala Gly Gly Gly His Ser Arg Ile Ile Gly Pro Asp
     259
                         245
                                              250.
                                                                   255
     261 ggt ggt gac ttg gtc gcg cct ctt gcc gaa aat gaa gag ggt att ctc
                                                                             816
     262 Gly Gly Asp Leu Val Ala Pro Leu Ala Glu Asn Glu Glu Gly Ile Leu
     263
                     260
                                          265
     265 tac gca aac ctt gat cct gga gta cgc atc ctt gct aaa atg gcg gca
                                                                             864
     266 Tyr Ala Asn Leu Asp Pro Gly Val Arg Ile Leu Ala Lys Met Ala Ala
                 275
     267
                                      280
                                                          285
     269 gac cct gct ggt cat tat tcc cgt ccc gac att act cgc ttg cta ata
                                                                             912
     270 Asp Pro Ala Gly His Tyr Ser Arg Pro Asp Ile Thr Arg Leu Leu Ile
     271
             290
                                  295
                                                      300
     273 gat cgc agc cct aaa tta ccg gta gtt gaa att gaa ggt gat ctt cgt
                                                                             960
     274 Asp Arg Ser Pro Lys Leu Pro Val Val Glu Ile Glu Gly Asp Leu Arg
     275 305
                              310
                                                  315
                                                                       320
     277 cct tac gct ttg ggt aaa gcg tct gag acg ggt gcg caa ctc gaa gaa
                                                                             1008
     278 Pro Tyr Ala Leu Gly Lys Ala Ser Glu Thr Gly Ala Gln Leu Glu Glu
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                         325
                                              330
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     281 att tga
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     282 Ile
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     286 <211> LENGTH: 337
     287 <212> TYPE: PRT
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     289 <223> OTHER INFORMATION: Description of Unknown Organism: Obtained from an
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     295 Met Asp Leu Glu Ala Thr Val Asp Lys Thr Ile Glu Leu Met Glu Glu
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                      20
     297 Ala Ala Arg Asn Asn Ala Arg Leu Ile Ala Phe Pro Glu Thr Trp Ile
     298
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                                       40
                                                           45
     299 Pro Gly Tyr Pro Trp Phe Leu Trp Leu Asp Ser Pro Ala Trp Ala Met
     300
     301 Gln Phe Val Arg Gln Tyr His Glu Asn Ser Leu Glu Leu Asp Gly Pro
     302 65
                               70
     303 Gln Ala Lys Arg Ile Ser Asp Ala Ala Lys Arg Leu Gly Ile Met Val
     304
                          85
                                               90
     305 Thr Leu Gly Met Ser Glu Arg Val Gly Gly Thr Leu Tyr Ile Ser Gln
     306
                                          105
                     100
     307 Trp Phe Ile Gly Asp Asn Gly Asp Thr Ile Gly Ala Arg Arg Lys Leu
     308
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                                                          125
     309 Lys Pro Thr Phe Val Glu Arg Thr Leu Phe Gly Glu Gly Asp Gly Ser
     310
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                                  135
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VERIFICATION SUMMARY

DATE: 06/29/2001 TIME: 14:23:09

PATENT APPLICATION: US/09/751,299A

Input Set : A:\DIVER1440-2final.txt
Output Set: N:\CRF3\06292001\I751299A.raw

L:132 M:258 W: Mandatory Feature missing, <220> FEATURE: L:289 M:258 W: Mandatory Feature missing, <220> FEATURE: STATISTICS SUMMARY

DATE: 06/29/2001 PATENT APPLICATION: US/09/751,299A TIME: 14:23:09

Input Set : A:\DIVER1440-2final.txt

Output Set: N:\CRF3\06292001\I751299A.raw

Application Serial Number: US/09/751,299A

Alpha or Numeric: Numeric

Application Class:

Application File Date: 12-28-2000

Art Unit: OIPE

Software Application: PatentIn Total Number of Sequences: 4

Total Nucleotides: 2055 Total Amino Acids: 683 Number of Errors: 0 Number of Warnings: 2 Number of Corrections: 0

MESSAGE SUMMARY

258 W: 2 (Mandatory Feature missing)

DATE: 05/31/2001

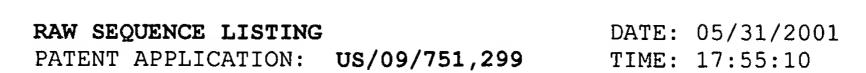
TIME: 17:55:10

OIPE

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Does Not Comply
                                                                      Corrected Diskette Needed
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                                                                             pp. 3,5
                     Output Set: C:\CRF3\05312001\I751299.raw
      3 <110> APPLICANT: Madden, Mark
              Weiner, David P.
              Chaplin, Jennifer A.
      7 <120> TITLE OF INVENTION: METHODS FOR PRODUCING ENANTIOMERICALLY PURE
              ALPHA-SUBSTITUTED CARBOXYLIC ACIDS
     10 <130> FILE REFERENCE: DIVER1440-2
     12 <140> CURRENT APPLICATION NUMBER: US 09/751,299
C--> 13 <141> CURRENT FILING DATE: 2001-05-01
     15 <150> PRIOR APPLICATION NUMBER: 60/254,414
     16 <151> PRIOR FILING DATE: 2000-12-07
     18 <150> PRIOR APPLICATION NUMBER: 60/173,609
     19 <151> PRIOR FILING DATE: 1999-12-29
     21 <160> NUMBER OF SEQ ID NOS: 4
     23 <170> SOFTWARE: PatentIn Ver. 2.1
     25 <210> SEQ ID NO: 1
     26 <211> LENGTH: 1041
     27 <212> TYPE: DNA
     28 <213> ORGANISM: Unknown Organism
     30 <220> FEATURE:
     31 <223> OTHER INFORMATION: Description of Unknown Organism: Obtained from an
     32
              environmental sample
     34 <220> FEATURE:
     35 <221> NAME/KEY: CDS
     36 <222> LOCATION: (1)..(1041)
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                          5
     41
          1
                                              10
                                                                  15
     43 ccg gtg ttc ctc gat ctc gac cgc aca gtc gag aaa gcg atc ggc ctg
     44 Pro Val Phe Leu Asp Leu Asp Arg Thr Val Glu Lys Ala Ile Gly Leu
     45
                     20
                                          25
                                                              30
     47 atc gag cag gcg gcc aag cag gac gtg cgc ctg atc gca ttc cca gag
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     48 Ile Glu Gln Ala Ala Lys Gln Asp Val Arg Leu Ile Ala Phe Pro Glu
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     52 Thr Trp Ile Pro Gly Tyr Pro Phe Trp Ile Trp Leu Gly Ala Pro Ala
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     56 Trp Gly Met Arg Phe Val Gln Arg Tyr Phe Glu Asn Ser Leu Val Arg
     57 65
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     59 ggc agc aag cag tgg cag gcc ctg gcg gat gcg gcc cgc cgc cac ggc
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     60 Gly Ser Lys Gln Trp Gln Ala Leu Ala Asp Ala Ala Arg Arg His Gly
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     63 atg cat gtc gtg gcc ggc tat agc gag cgc gcg ggc ggc agc ctc tat
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     64 Met His Val Val Ala Gly Tyr Ser Glu Arg Ala Gly Gly Ser Leu Tyr
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     67 atg ggc cag gcg atc ttc ggc ccc gat ggc gat ctg atc gcc gcg cgc
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RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/751,299A



Input Set : A:\DIVER1440-2final.txt
Output Set: C:\CRF3\05312001\I751299.raw

68 Met Gly Gln Ala Ile Phe Gly Pro Asp Gly Asp Leu Ile Ala Ala Arg 69 115 120 125	
71 cgc aag ctc aag cct acc cat gcg gag cgc acc gtg ttc ggc gag gga	432
72 Arg Lys Leu Lys Pro Thr His Ala Glu Arg Thr Val Phe Gly Glu Gly 73 130 135 140	
75 gac ggc agc cat ctc gcg gtg cac gat acc gcc atc ggg cgc ctc ggc	480
76 Asp Gly Ser His Leu Ala Val His Asp Thr Ala Ile Gly Arg Leu Gly	400
77 145 150 150 155 160 A18 Val his Asp the A18 Tre Gry Arg Bed Gry	
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80 Ala Leu Cys Cys Trp Glu His Ile Gln Pro Leu Ser Lys Tyr Ala Met 81 165 170 175	
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83 tac gcc gcc gac gaa cag gtc cac gtc gcg tcg tgg ccg agc ttc agc	576
84 Tyr Ala Ala Asp Glu Gln Val His Val Ala Ser Trp Pro Ser Phe Ser	
85 180 185 190	C24
87 ctc tat cgc ggc atg gcc tat gcg ctc gga ccg gag gtc aat acc gcc	624
88 Leu Tyr Arg Gly Met Ala Tyr Ala Leu Gly Pro Glu Val Asn Thr Ala	
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91 gca age cag ate tae geg gte gag gge gge tge tae gtg etg geg teg	672
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93 210 215 220	
95 tgc gcg acc gtt tcg ccg gag atg atc aag gta ttg gtg gat acg ccc	720
96 Cys Ala Thr Val Ser Pro Glu Met Ile Lys Val Leu Val Asp Thr Pro	
97 225 230 235 240	
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105 260 265 270	
107 gga ctg ctg gtc gcc gat atc gac ctc ggc atg atc gcg ttg gcc aag	864
108 Gly Leu Leu Val Ala Asp Ile Asp Leu Gly Met Ile Ala Leu Ala Lys	
109 275 280 285	
111 gcg gcg gcc gat ccg gcg ggc cac tat tca cgg ccc gac gta acg cgg	912
112 Ala Ala Asp Pro Ala Gly His Tyr Ser Arg Pro Asp Val Thr Arg	
113 290 295 300	
115 ctg ctg ctg gat cga cgt ccg gcc caa cgc gtc gtc acg ctt gat gcc	960
116 Leu Leu Asp Arg Arg Pro Ala Gln Arg Val Val Thr Leu Asp Ala	
117 305 310 315 320	
119 gca ttc gaa ccg caa aac gag gac aag ggc gac gcg ccc gcg ctg cgc	1008
120 Ala Phe Glu Pro Gln Asn Glu Asp Lys Gly Asp Ala Pro Ala Leu Arg	
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132 (220) EEATHIDE.	
See next page.	
> >66 /16V/ bage.	

W-->



TIME: 17:55:10

Input Set : A:\DIVER1440-2final.txt
Output Set: C:\CRF3\05312001\I751299.raw

PATENT APPLICATION: US/09/751,299

132 <223> OTHER INFORMATION: Description of Unknown Organism. Obtained from an 135 <400> SEQUENCE: 2 Description cut off due to missing (220) feature. 136 Met Ser Glu Pro Met Thr Lys Tyr Arg Gly Ala Ala Val Gln Ala Ala 138 Pro Val Phe Leu Asp Leu Asp Arg Thr Val Glu Lys Ala Ile Gly Leu 140 Ile Glu Gln Ala Ala Lys Gln Asp Val Arg Leu Ile Ala Phe Pro Glu 142 Thr Trp Ile Pro Gly Tyr Pro Phe Trp Ile Trp Leu Gly Ala Pro Ala 144 Trp Gly Met Arg Phe Val Gln Arg Tyr Phe Glu Asn Ser Leu Val Arg 145 65 146 Gly Ser Lys Gln Trp Gln Ala Leu Ala Asp Ala Ala Arg Arg His Gly 148 Met His Val Val Ala Gly Tyr Ser Glu Arg Ala Gly Gly Ser Leu Tyr 150 Met Gly Gln Ala Ile Phe Gly Pro Asp Gly Asp Leu Ile Ala Ala Arg 152 Arg Lys Leu Lys Pro Thr His Ala Glu Arg Thr Val Phe Gly Glu Gly 154 Asp Gly Ser His Leu Ala Val His Asp Thr Ala Ile Gly Arg Leu Gly 155 145 156 Ala Leu Cys Cys Trp Glu His Ile Gln Pro Leu Ser Lys Tyr Ala Met 158 Tyr Ala Ala Asp Glu Gln Val His Val Ala Ser Trp Pro Ser Phe Ser 160 Leu Tyr Arg Gly Met Ala Tyr Ala Leu Gly Pro Glu Val Asn Thr Ala 162 Ala Ser Gln Ile Tyr Ala Val Glu Gly Gly Cys Tyr Val Leu Ala Ser 164 Cys Ala Thr Val Ser Pro Glu Met Ile Lys Val Leu Val Asp Thr Pro 165 225 166 Asp Lys Glu Met Phe Leu Lys Ala Gly Gly Gly Phe Ala Met Ile Phe 168 Gly Pro Asp Gly Arg Ala Leu Ala Glu Pro Leu Pro Glu Thr Glu Glu 170 Gly Leu Leu Val Ala Asp Ile Asp Leu Gly Met Ile Ala Leu Ala Lys 172 Ala Ala Asp Pro Ala Gly His Tyr Ser Arg Pro Asp Val Thr Arg 174 Leu Leu Leu Asp Arg Arg Pro Ala Gln Arg Val Val Thr Leu Asp Ala 175 305 176 Ala Phe Glu Pro Gln Asn Glu Asp Lys Gly Asp Ala Pro Ala Leu Arg 178 Val Val Ala Glu Ser Ala Ala Ala Gln 183 <210> SEQ ID NO: 3 184 <211> LENGTH: 1014 185 <212> TYPE: DNA





RAW SEQUENCE LISTING DATE: 05/31/2001 PATENT APPLICATION: US/09/751,299 TIME: 17:55:10

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196 <400> SEQUENCE: 3 197 atg aaa gaa gct atc aag gtc gcc tgc gtg caa gcc gcc ccg atc tac 48 198 Met Lys Glu Ala Ile Lys Val Ala Cys Val Gln Ala Ala Pro Ile Tyr	
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198 Met Lys Glu Ala Ile Lys Val Ala Cys Val Gln Ala Ala Pro Ile Tyr	
199 1 5 10 15	
201 atg gat ttg gag gcg acg gtg gac aaa acc att gag ttg atg gaa gaa 96	
202 Met Asp Leu Glu Ala Thr Val Asp Lys Thr Ile Glu Leu Met Glu Glu	
203 25 30	
205 gca gca cgt aat aat gct cgt ctg atc gcc ttt ccg gaa act tgg att 144	
206 Ala Ala Arg Asn Asn Ala Arg Leu Ile Ala Phe Pro Glu Thr Trp Ile	
207 35 40 45	
209 cca ggc tac cca tgg ttt ctt tgg ctt gac tca cca gca tgg gca atg 192	
210 Pro Gly Tyr Pro Trp Phe Leu Trp Leu Asp Ser Pro Ala Trp Ala Met	
211 50 55 60	
213 caa ttt gta cgc caa tac cat gag aac tca ttg gag ttg gat ggc cct 240	
214 Gln Phe Val Arg Gln Tyr His Glu Asn Ser Leu Glu Leu Asp Gly Pro	
215 65 70 75 80	
217 caa gct aag cgc att tca gat gca gcc aag cgg ttg gga atc atg gtc 288	
218 Gln Ala Lys Arg Ile Ser Asp Ala Ala Lys Arg Leu Gly Ile Met Val 219 85 90 95	
221 acc ctg ggg atg agt gaa cgg gtc ggt ggc acc ctt tac atc agt cag 336 222 Thr Leu Gly Met Ser Glu Arg Val Gly Gly Thr Leu Tyr Ile Ser Gln	
222 Thi field dry field der dru Arg var dry dry Thi field ryr fre der drift 223 100 105 110	
225 tgg ttc ata ggc gat aat ggt gac acc att ggg gcc cgg cga aag ttg 384	
226 Trp Phe Ile Gly Asp Asn Gly Asp Thr Ile Gly Ala Arg Arg Lys Leu	
227 115 120 125	
229 aaa cct act ttt gtt gaa cgt act ttg ttc ggc gaa ggg gat ggt tca 432	
230 Lys Pro Thr Phe Val Glu Arg Thr Leu Phe Gly Glu Gly Asp Gly Ser	
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235 145 150 155 160	
237 tgt tgg gag cac ctt caa ccg cta aca aaa tac gct ttg tat gca caa 528	
238 Cys Trp Glu His Leu Gln Pro Leu Thr Lys Tyr Ala Leu Tyr Ala Gln	
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Input Set : A:\DIVER1440-2final.txt
Output Set: C:\CRF3\05312001\I751299.raw

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		Pro	Tyr	Ala	Leu	••	Lys	Ala	Ser	Glu		Gly	Ala	Gln	Leu		Glu	
	279			,		325					330					335		
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••	286 287 288	<213 <213 <213	1> LI 2> T' 3> OI	ENGTI YPE: RGAN	H: 33 PRT FSM:	37	nown	Orga	anism	n	0	scr	ipt.	,01	c. {2	υ Υ ΖΟ̈́)	of Pea	f due ture.
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VERIFICATION SUMMARY

DATE: 05/31/2001 PATENT APPLICATION: US/09/751,299 TIME: 17:55:11

Input Set : A:\DIVER1440-2final.txt Output Set: C:\CRF3\05312001\I751299.raw

L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:132 M:258 W: Mandatory Feature missing, <220> FEATURE: L:289 M:258 W: Mandatory Feature missing, <220> FEATURE: